Physician Satisfaction with Athletic Trainers in the Physician Practice Setting

Esther C. Nolton, MEd, LAT, ATC, CSCS,* Forrest Q. Pecha, MS, ATC,† Joseph J. Greene, MS, ATC,‡ Elizabeth L. Young, MS, ATC,§ Jessica A. Wertz, DO,¶ and Robin V. West, MD**

Physicians use collaborative teams of allied health professionals to increase practice productivity and promote better patient outcomes. Athletic trainers (ATs) are viable ancillary staff, but it is not known how physicians perceive employing ATs in this setting. A web-based survey administered to physicians found 93.8% reported being "extremely satisfied" and that ATs are most cost-effective as midlevel healthcare professionals. Budget and practice-wide consensus were cited as two of the greatest limitations, despite 85.6% of physicians stating that it is their preference to work with ATs. Physicians stated a healthcare model including ATs is optimal and "should be the standard." However, some states lack legislative progression and CMS recognition to permit ATs to function at the top of their scope of practice. Physicians expressed a need for increased executive buy-in to increase the scope of ATs in the practice setting. Integrating ATs as ancillary staff will increase clinic productivity and patient-centered outcomes.

KEY WORDS: Ancillary staff; collaboration; clinical management; job satisfaction; allied health; healthcare delivery; value-based care; team-based care.

*Project Coordinator, Adjunct Faculty, and Doctoral Student, College of Education and Human Development, George Mason University; 4400 University Drive, MS 6D2, Fairfax, VA, 22030; e-mail: echou@gmu.edu. †St. Luke's Sports Medicine, Boise, Idaho. ‡University of Wisconsin Hospital and Clinics, Madison, Wisconsin. §Inova Sports Medicine, Fairfax, Virginia. ¶Inova Sports Medicine, Fairfax, Virginia. **Inova Sports Medicine, Fairfax, Virginia.

Physicians rely on a collaborative team of allied healthcare professionals to optimize patient care. Athletic trainers (ATs) are mid-level healthcare professionals—recognized by the American Medical Association and Department of Health and Human Services—with a wide array of skills that can be vital to assist physicians.[1,2] ATs are recognized for their unique expertise in orthopedics and are increasingly pursuing employment in outpatient physician practices around the United States.[3,4] The scope of ATs in the clinical setting may include, but is not limited to, recording patient history and performing physical examinations; completing diagnostic exam forms and additional referrals for treatments; educating patients; developing home exercise programs; dictating medical records; fitting durable medical equipment; gait training and crutch fitting; and postoperative care, including patient education and removing sutures and staples.[3] The Commission on Accreditation of Athletic Training Education (CAATE) has developed post-professional residency programs that provide specialized education in eight Clinical Areas of Focus, including orthopedics.[5] Some residency programs with an emphasis in orthopedics provide educational programming within the physician practice setting (PPS), including preparation to assist in the operating room. This has greatly facilitated physician acceptance and led to increased hiring of ATs in physician practices.[6-8]

Patients view athletic trainers as positive and personable healthcare providers within the clinical setting.

Previous studies show that patients view ATs as positive and personable healthcare providers within the clinical setting.[6,9] Furthermore, ATs had an average 9.1 out of 10 rating in overall patient satisfaction during visits to an orthopedic clinic, and were perceived as having comparable skills and knowledge to third- and fourth-year orthopedic medical residents.[10] Although ATs have unique knowledge, skills, and abilities that are instrumental in the orthopedics/sports medicine PPS, ATs continue to compete with other midlevel practitioners to fill these roles.[11] Although

previous literature reported that ATs have diverse skills that increased practice efficiency, revenue, and productivity, it is not known if physicians recognize the value of ATs.[6,9,12-15] The purpose of this study was to align physician perceptions of preference and satisfaction with established AT competency standards.[5,16] A secondary aim was to understand reasons physicians choose (or do not choose) to employ ATs in this setting.[3,10,12]

METHODS

Athletic Training Standards

The Board of Certification for Athletic Trainers (BOC) assembles a Practice Analysis Task Force every five years for the purpose of revising practice domains to create a minimum standard to certify entry-level ATs.[16] CAATE set standards with six core competencies for post-professional residency programs, above and beyond those set by the BOC for entry-level ATs, that align with the Institute of Medicine core competencies.[5,17] All CAATE-accredited residency programs provide training in patient-centered care, interdisciplinary collaboration, evidence-based practice, quality improvement, use of healthcare informatics, and professionalism. Nine survey items addressing physician satisfaction with AT qualities and skills relate to these domains.

Survey Development

Survey items were created and vetted through multiple iterations by a collaborative team of subject-matter experts, including ATs, a healthcare manager, an AT residency program director, an orthopedic surgeon, and a sports medicine primary care physician. An open-ended question was included to allow physicians to express any additional thoughts otherwise neglected or nuanced in other survey items. The survey was piloted with a small sample of physicians and items were edited accordingly. It was built by a Qualtrics Research Core Certified methodologist. This study was approved by the institutional review board at Inova Health System (Fairfax, Virginia)..

Sampling Design and Participant Recruitment

A web-based survey was administered through Qualtrics (Provo, Utah) to active members of the American Orthopaedic Society for Sports Medicine (AOSSM) and the American Medical Society for Sports Medicine (AMSSM), and was sent manually to other physicians via snowball sampling as well. AOSSM and AMSSM Research Committees reviewed the survey instrument through a comprehensive application process. The data collection window was open for a total of six weeks for both organizations, and all partial completions were also captured as responses at the time of closure. All responses were recorded anonymously.

Table 1. Survey Participant Breakdown by Discipline and Practice Setting

Discipline or Setting	No. (%)
Discipline (n = 519)	
Emergency Medicine	10 (1.9)
Family Medicine	13 (2.7)
Pediatric Sports Medicine	15 (2.9)
Physical Medicine & Rehabilitation	14 (2.9)
Primary Care with Sports Medicine Fellowship Training	338 (66.1)
Primary Care without Sports Medicine Fellowship Training	18 (3.7)
Orthopedic Surgeon	111 (21.4)
Setting (n= 510)	
Academic Practice	224 (43.4)
Hospital-Based Clinic	136 (26.4)
Private Practice	131 (25.4)
University Health Services	11 (2.1)
Other	8 (1.5)

Data Analysis

Quantitative analysis of descriptive statistics for all survey items was done using Qualtrics and SPSS 24 (IBM, 2016). Open-ended responses were analyzed using an etic thematic coding approach to deepen understanding of participants' perceptions.[18] Peer debriefing was conducted with the research team to promote accurate interpretations. Responses were reported verbatim to increase validity.

RESULTS

A total of 573 physicians consented to participate in the survey, and 519 continued beyond consent—of which, 364 (70%) reported currently employing ATs in their clinics. Participants were mostly primary care physicians with sports medicine fellowship training (66.1%) from academic practices (43.4%) (Table 1). A diverse number of ATs were employed by physicians (Figure 1), with an average of 27.2% reported to be residency-trained. Of the 60 physicians who reported feeling at all dissatisfied across the nine qualities of ATs, 71.7% reported at least half of their ATs were not residency-trained. Of the 147 respondents who reported a non-zero percentage of residency-trained ATs, 68.7% of physicians felt residency-trained ATs were better equipped to be effective from the start of employment compared with non-residency-trained ATs.

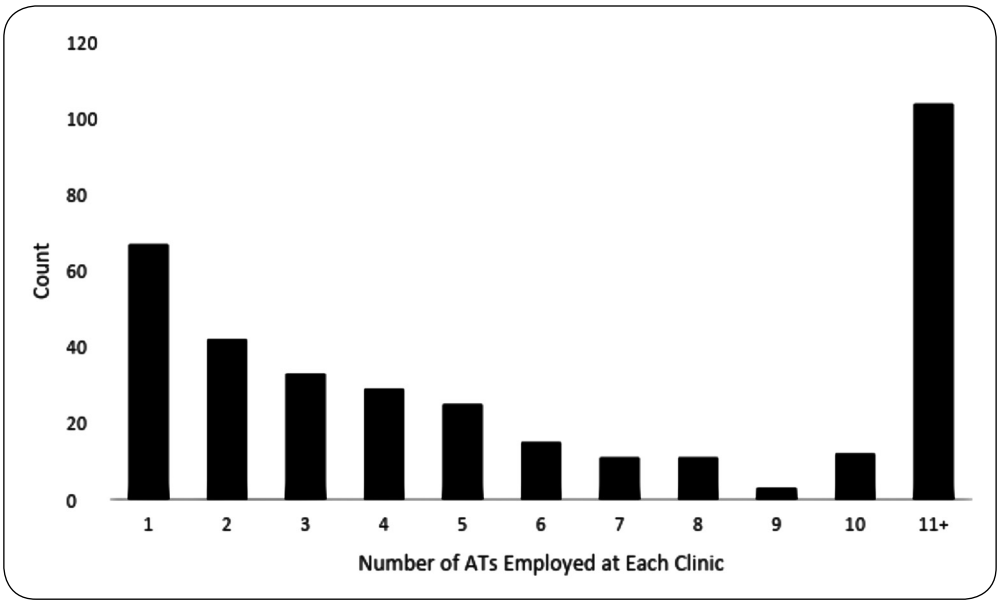

Figure 1. Frequency of responses for number of athletic trainers (ATs) employed at each clinic.

The four most common reasons why physicians preferred working with ATs were: sports medicine or musculoskeletal expertise (n=250); experience working with athletes, coaches, and parents (n=235); skills in patient education regarding pre- and postoperative instructions/exercises (n=219); and experience fitting and instructing on use of assistive devices (n=210). Physicians stated ATs improved efficiency, patient care, and practice outcomes, allowing them to spend more time with patients and provide better overall care. Of the physicians who currently employed ATs in their clinics, 93.8% reported being "extremely satisfied", 5.9% were "somewhat satisfied", and less than 1% were "somewhat dissatisfied" with ATs working in their practice. None were "extremely dissatisfied" with their ATs. Furthermore, physicians rated their level of satisfaction with residency program core competencies (Figures 2 and 3). Most respondents were "extremely satisfied" across all nine criteria with less than 5% of respondents feeling either "somewhat dissatisfied" or "extremely dissatisfied" in any category.

Despite not currently employing ATs at their clinics, 27.5% reported previously employing ATs and 85.6% prefer working with an AT. Physicians most commonly cited budget limitations and disagreement among partners or employers (23.7%) as barriers to hiring ATs, and 34.9% reported hiring medical assistants (MAs) as a cost-reductive alternative to ATs. Additionally, some respondents expressed restrictions due to local state practice legislation that bar billing and reimbursement of assistive services conducted by ATs. Additionally, themes emerged from 101 open-ended responses:

- ATs as uniquely qualified and ideal team members;
- The significance of residency training;
- Physician job satisfaction;
- Practice efficiency and productivity; and
- Barriers to a desired healthcare model.

DISCUSSION

Athletic Trainers as Uniquely Qualified and Ideal Team Members

Sports medicine and orthopedic practices require specific skills to match the needs of a unique patient population.[11,19] Physicians clarified that their decision to employ ATs was less a preference over other healthcare professionals than a consideration of what was a more appropriate fit for the needs of their practice. In addition to selecting ATs as the "ideal assist in every capacity," several spoke about the unique complement ATs provide to a comprehensive team.[4] In addition to expert knowledge, ATs were reported to have a rare ability to interact well with patients, parents, and coaches—a critical interpersonal quality that helps foster healthy relationships with the community.[19,20] Although some physicians are choosing to employ MAs in lieu of ATs, this appears to come at a cost.[12] Physicians felt "hugely inefficient" when forced to use MAs because "despite the higher cost, it [having ATs] allows me much more freedom to see a higher volume of patients without sacrificing quality." Previous literature showed an average of 20% increase in encounters and higher collections in clinics employing ATs in contrast to those with MAs.[12,15] Physicians comparing ATs with other mid-level practitioners reported ATs to

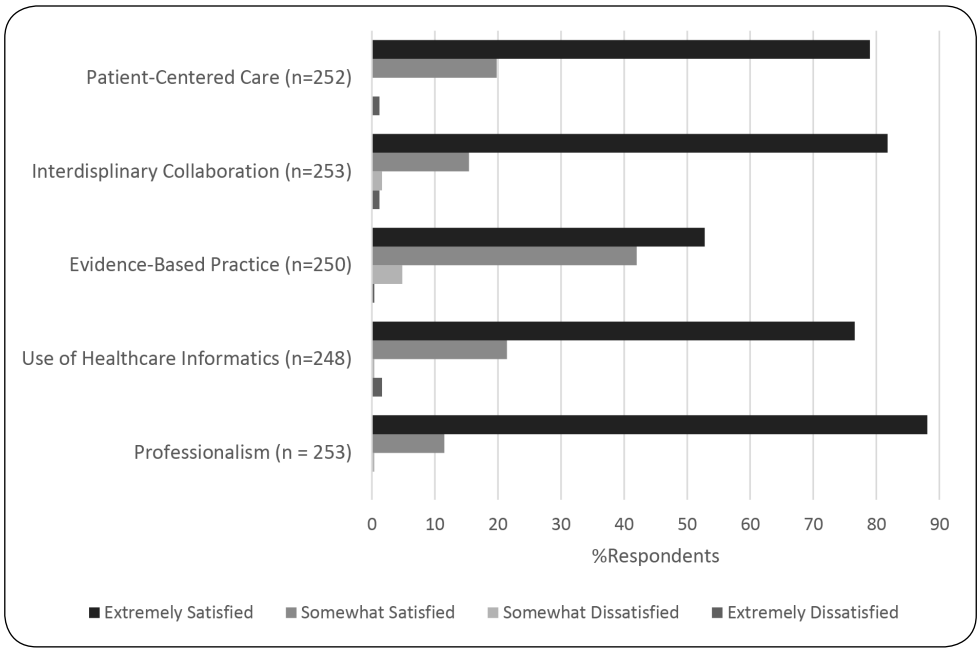

Figure 2. Percentage of physician satisfaction with qualities of athletic trainers employed in the physician practice setting.

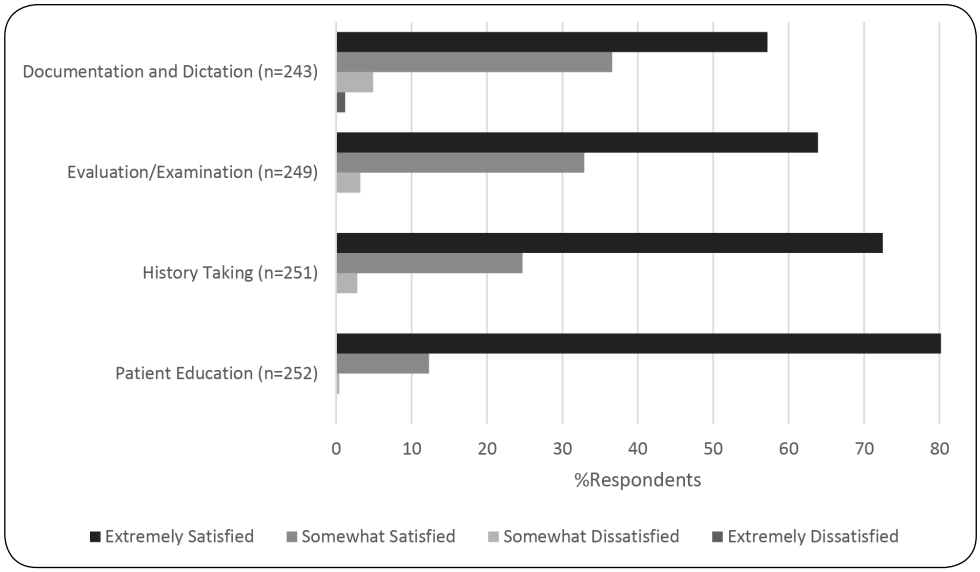

Figure 3. Percentage of physician satisfaction with skills of athletic trainers employed in the physician practice setting.

be more appropriate, knowledgeable, and cost-effective to assist physicians in this environment.[15,19] One physician wrote, "If given the choice of losing my CNP or my AT, I'm keeping the AT every time and at a third of the cost."

Significance of Residency Training

CAATE-accredited orthopedic residency programs, housed within physician practice clinics and the operating room, provide experiences specifically designed to equip ATs to be instrumental in the PPS.[5,7,8] The intention to pursue residency training translates to the evident "motivated" and "extremely hard-working" nature of ATs noted by several physicians. Advanced training allows ATs to function similarly to certified nurse practitioners (CNPs), physical therapists (PTs), and physician assistants as primary assists. Residency programs provide ATs with deep knowledge in specialty areas and build capacity that is omitted in entry-level professional athletic training education

programs.[7] ATs who entered the PPS immediately following graduation from an entry-level degree program reported feeling ill-prepared in some areas unique to the setting.[7] It is understandable, therefore, that physicians who employ ATs without residency training reported feeling less satisfied when rating them against standards set for ATs who are products of an accredited residency program.

Physician Job Satisfaction

Demands on physicians and the risk of practitioner burnout are high.[21,22] Practice policy standards continue to rise with the competitive healthcare market, and it is becoming increasingly difficult for physicians to meet quality benchmarks.[22] In a 2015 survey, most physicians (90%) reported experiencing symptoms of burnout, and one of the top reasons was practical hurdles in staffing.[21] Researchers suggested that better patient–provider engagement would mitigate provider burnout and increase patient satisfaction.[22] Physicians attributed their successful management of simultaneous high-level tasks to the support of autonomous and competent staff. Unreliable staffing results in an increased burden on physicians and threatens physician quality of life.[6,22] Our study found that ATs improve patient–provider interactions that "are vital to the efficiency . . . and overall job satisfaction" and allow physicians "to see more patients in practice and provide better care."

Practice Efficiency and Productivity

Researchers identified service gaps in current physician practices and found ATs to be a viable solution to meet those needs.[19] ATs are capable of combining various practice needs into a singular role—while performing at a high level—with the expense of their employment recouped by marked increases in patient throughput and satisfaction.[9,15,19] Logistically, improved clinic efficiency also allows for more patient encounters, which increases the number of surgical cases and, therefore, clinic revenue.[4,9,12,15] Our findings are consistent with existing literature that has explored overall improved patient satisfaction, physician quality of life, and clinic benefits associated with employing ATs.[6,19,23]

Barriers to a Desired Healthcare Model

The most commonly reported factor impeding employment of ATs in the PPS is a misunderstanding or undervaluing of ATs by other physicians or managers—leading to local or institutional policy barriers that restrict an ideal staffing infrastructure. CMS has set standard guidelines for E/M services[24] that define billable services and specify approved providers who can offer and document these services within their scope of practice. ATs are relatively new to the PPS setting compared with other allied healthcare professionals who have an established presence in the clinic.[3,23] Although approved services are within the core competencies of athletic training education, CMS has yet to recognize ATs as qualified practitioners. Physicians largely recognize that ATs are "very versatile, though underappreciated by [the] hospital system," and are unable to hire or utilize ATs to their full potential. Therefore, it is important that healthcare managers understand the scope of AT roles and responsibilities. Efforts must continue to advocate for the versatility of AT skills that extend beyond the sidelines and propose changes to CMS regulation to include ATs as qualified healthcare providers.[19] Healthcare managers can greatly influence policy changes that would allow healthcare systems and insurance agencies to become more accepting of a better healthcare model.

Study Limitations

It is necessary to report a few limitations of this study. We used a nonrandom sampling of physicians across multiple disciplines with varying uses and needs of ATs. In order to preserve anonymity, it was impossible to ensure responses were unique entries, but the survey platform prevented multiple entries from the same IP address. Some physicians reported that ATs could hold dual credentials (e.g. AT/PT), which may affect selections regarding preference of one profession over another. Additionally, some physicians previously held or currently hold a dual credential as an AT themselves and noted their biases toward ATs. We must also acknowledge potential researcher biases due to our professional roles and expert knowledge as members of standard-setting committees for the BOC and CAATE. We attempted to mitigate any biases by incorporating external reviews and peer debriefing with non-ATs.

CONCLUSION

Physicians widely expressed that they believe ATs are an invaluable asset to their practice. Their knowledge, skills, and abilities are unparalleled by other mid- to high-level ancillary practitioners, which makes them a more cost-effective and valuable alternative in this role. ATs continue to battle legislative restrictions that keep physicians from achieving an optimal healthcare model to promote better patient and practice outcomes. This work will serve to inform physicians of their colleagues' perceived value of ATs in the PPS and call existing supporters to action to encourage integrating ATs in this optimized healthcare model. Healthcare managers have the ability to promote advocacy of ATs in the practice setting by educating peers, managers, and policymakers about the documented benefits in patient satisfaction, physician quality of life, and clinic productivity facilitated by ATs.

REFERENCES

1. NATA. What is athletic training www.nata.org/about/athletic-training. Accessed August 13, 2018.

2. NATA. So you want to become an athletic trainer? Carrollton, TX: NATA.
3. Greene JJ. Athletic trainers in an orthopedic practice. *Athl Ther Today.* 2004;9(5):62-63.
4. Frogner BK, Westerman B, DiPietro L. The value of athletic trainers in ambulatory settings. *J Allied Health.* 2015;44(3):169-176.
5. CAATE. *Standards for the Accreditation of Post-professional Athletic Training Residency Programs.* Austin, TX: Commission on Accreditation of Athletic Training Education; 2018.
6. Pecha FQ, Bahnmaier LA, Hasty ML, Greene JJ. Physician satisfaction with residency-trained athletic trainers as physician extenders. *Int J Athl Ther Train.* 2014;19(2):1-3. doi: 10.1123/ijatt.2013-096
7. Schilling J. Educational preparation and experiences in the clinical setting: entry-level athletic trainers' perspectives. *Athl Train Educ J.* 2011;6(3):145-153.
8. CAATE. CAATE establishes residency focus areas. https://caate.net/caate-establishes-residency-focus-areas/ Accessed August 26, 2018.
9. Nicolello TS, Pecha FQ, Omdal RL, Nilsson KJ, Homaechevarria AA. Patient throughput in a sports medicine clinic with the implementation of an athletic trainer: a retrospective analysis. *Sports Health.* 2017;9(1):70-74. doi: 10.1177/1941738116676452
10. Pecha FQ, Nicolello TS, Xerogeanes JW, Karas S, Labib SA. Patient perceptions of athletic trainers and orthopaedic medical residents as primary clinical support staff in sports medicine practice: a randomized, double-blinded prospective survey. *J Allied Health.* 2015;44:225-228.
11. Day CS, Boden SD, Knott PT, O'Rourke NC, Yang BW. Musculoskeletal workforce needs: are physician assistants and nurse practitioners the solution? *J Bone Joint Surg Am.* 2016;98(e46):1-6. doi: 10.2106/JBJS.15.00950
12. Pecha FQ, Xerogeanes JW, Karas SG, Himes ME, Mines BA. Comparison of the effect of medical assistants versus certified athletic trainers on patient volumes and revenue generation in a sports medicine practice. *Sports Health.* 2013;5:337-339. doi: 10.1177/1941738112472659
13. Storch SM, Stevens SW, Allen AM. Orthopaedic surgeons' perceptions of athletic trainers as physician extenders. *Athl Ther Today.* 2007;12(3):29-31.
14. Massie JB, Strang AJ, Ward RM. Employer perceptions of the academic preparation of entry-level certified athletic trainers. *Athl Train Educ J.* 2009;4(2):70-74.
15. Hajart AF, Pecha FQ, Hasty ML, Burfeind SM, Greene JJ. The financial impact of an athletic trainer working as a physician extender in orthopedic practice. *J Med Pract Manage.* 2014;29:250-254.
16. Henderson J. *The 2015 Athletic Trainer Practice Analysis Study.* Omaha, NE: Board of Certification; 2015.
17. IPEC. *Core Competencies for Interprofessional Collaborative Practice: 2016 Update.* Washington, DC: Interprofessional Education Collaborative; 2016.
18. Carspecken PF. *Critical Ethnography in Educational Research.* New York: Routledge; 1996.
19. Noller CL, Pecha FQ, Wetherington JJ, Berry DC. Enhancing coordinated care delivery and the healthcare team: the impact and future of athletic trainers in ambulatory practice settings. *J Med Pract Manage.* 2018;33:285-291.
20. Kahanov L, Andrews L. A survey of athletic training employers' hiring criteria. *Journal of athletic training.* 2001;36:408-412.
21. Studer Group. Healing Physician Burnout Survey. 2015. www.studergroup.com/industry-impact/healing-physician-burnout. Accessed August 16, 2018.
22. Epperson WJ, Childs SF, Wilhoit G. Provider burnout and patient engagement: the quadruple and quintuple aims. *J Med Pract Manage.* 2016;31:359-363.
23. Kirsch DL. *The Impact of Athletic Trainers in a Clinic Setting.* Fargo, ND: Advanced Athletic Training, North Dakota State University; 2018.
24. CMS. *Evaluation and Management Services.* Washington, DC: Department of Health and Human Services; 2017.